CALIFORNIA ENERGY COMMISSION
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Guidelines for Residential HERS Compliance Documentation Registered on or After October 1, 2010 – Newly Constructed Buildings and Additions

Starting January 1, 2010, the *2008 Building Energy Efficiency Standards* required all compliance documentation for newly constructed low-rise residential buildings requiring HERS verification and demonstrating compliance under the multiple orientation alternative to be registered with the appropriate HERS Provider. On October 1, 2010, this requirement was extended to all low-rise residential buildings requiring HERS field verification.

To ensure compliance with this regulation, please follow these guidelines for newly constructed dwellings and additions:

- Look for and review a registered Certificate(s) of Compliance (CF-1R) submitted with the building plans. A registered CF-1R will have a HERS Provider's watermark and a unique 12-digit registration number followed by 13 zeros located at the bottom of each page (see registration number guide and example registered CF-6R on the following pages).

- Look for and review an electronically signed and registered Installation Certificate(s) (CF-6R) posted by the installing contractor at the building site. The first 12 digits of its 21-digit registration number (followed by four zeros) will match the associated CF-1R's registration number.

- At final inspection, look for and review an electronically signed and registered Certificate(s) of Field Verification and Diagnostic Testing (CF-4R) posted at the building site by a certified HERS rater. The first 20 digits of its 25-digit registration number will match the associated CF-1R's registration number.

- At final inspection, verify that the work listed on the CF-1R has actually been completed and that the installed equipment matches what is listed on the CF-6R posted at the building site.

- You may verify that any registered compliance document is valid by searching for it on the appropriate HERS Provider's website using the document's registration number. (Currently CalCERTS [www.calcerts.com] is the only HERS Provider certified for newly constructed residential buildings and additions.) If the submitted CF-1R, 6R, or 4R does not exactly match the version posted on the provider's website, or if there is no electronic version available, its validity should be questioned.

To combat fraud, the California Energy Commission recommends that building department personnel use the HERS Providers' websites to perform random verification checks of registered compliance documents. (See HERS Providers' website information on next page.)

September 29, 2010

Registration Number Guide

provider (1=CHEERS; 2=CalCERTS; 3=CBPCA)	year (eg 3rd digit of year 2010)	year (eg 4th digit of year 2010)		CF-1R Type (N=new residential, A=alteration residential, D=addition residential)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	Revision Level (alpha only: A=first issuance; then sequential B through Z)		CF-6R Type (E=envelope, L=lighting, M=mechanical)	CF-6R Type (first numeric digit eg "2" from the mech-21)	CF-6R Type (second numeric digit eg "1" from the mech-21)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	numeric (sequential 0 through 9)	Revision Level (alpha only: A=first issuance; then sequential B through Z)		CF-4R Type (E=envelope, L=lighting, M=mechanical)	CF-4R Type (first numeric digit eg "2" from the mech-21)	CF-4R Type (second numeric digit eg "1" from the mech-21)	Revision Level (alpha only: A=first issuance; then sequential B through Z)
1	1	0	-	N	0	0	0	7	3	2	1	B	-	M	2	1	0	0	0	5	2	A	-	M	2	1	C

	9,999,999 numbers + 0			99,999 numbers			
	CF-1R			CF-6R		CF-4R	
				use 000000000 for CF-1R documents		use 0000 for CF-1R and CF-6R documents	

Note: Only capitalized alpha digits are used, to avoid confusion with the number Zero "0", the letter "O" is not used, and to avoid confusion with the number One "1", the letter "I" is not used.

HERS Providers

Approved for Newly Constructed Buildings, Additions, Alterations, and New Solar Homes Partnership Programs

CalCERTS – www.calcerts.com

Approved for Alterations Only

CBPCA – www.cbpca.org

Example Registered CF-6R from CalCERTS

INSTALLATION CERTIFICATE	CF-6R-MECH-20-HERS
Duct Leakage Test – Completely New or Replacement Duct System	(Page 1 of 2)

Site Address: 20400 Via Sansovino, Northridge CA 91324 (System 1)	Enforcement Agency: County of Los Angeles	Permit Number: 09010-20000-01587

Enter the Duct System Name or Identification/Tag: **System 1**

Enter the Duct System Location or Area Served: **LIVING**

Note: Submit one Installation Certificate for each duct system that must demonstrate compliance in the dwelling.

This certificate is required for compliance for completely new duct systems installed in new dwelling construction, and also for completely new or replacement duct systems in existing dwellings. For existing dwellings, a completely new or replacement duct system can also include existing parts of the original duct system (e.g., register boots, air handler, coil, plenums, etc.) if those parts are accessible and they can be sealed.

Duct Leakage Diagnostic Test - completely new or replacement duct system

Enter a value for the Allowed Leakage (CFM) for the duct system leakage verification. The value entered must be the VLLDCS criteria or one of the three calculated leakage rates described below.

Verified Low Leakage Ducts in Conditioned Space (VLLDCS) Compliance Credit. If compliance credit for verified low leakage ducts in conditioned space is shown in the special features section of the CF-1R, the leakage to outside test method must be used to verify duct leakage (refer to RA3.1.4.3.4), and 25 CFM must be entered for Allowed Leakage.	Allowed Leakage (CFM)
Allowed leakage calculation – (select one calculation method from this section). Use 6% (leakage factor = 0.06) for calculations if tested at "final" or 4% (leakage factor = 0.04) if tested at "rough." When utilizing Low Leakage Air Handler (LLAH) credit, the allowed duct leakage may be specified by the CF-1R to be less than 6%, in which case the user-specified leakage rate must be used in the calculations below. For example, if the user-specified leakage (specified as a percentage of fan airflow) is reported on the CF-1R as 3%, then use a leakage factor of 0.03 in the calculations below. ☑ Cooling system method: Nominal capacity of condenser in Tons **4** x 400 x *leakage factor* = **96** CFM ☐ Heating system method: 21.7 x _____ Output Capacity in Thousands of Btu/hr x *leakage factor* = _____ CFM ☐ Measured airflow method (RA3.1): Enter measured fan flow in CFM here _____ x *leakage factor* = _____ CFM	
Enter value for **Actual** leakage (CFM) in the right column, from measurement using applicable duct leakage pressurization test procedure from Reference Residential Appendix RA3.1(CFM @ 25 Pa).	Actual Leakage (CFM)
List **Actual** Leakage from duct leakage test(CFM)	85
Pass if **Actual** Leakage is equal to or less than Allowed Leakage	☑ Pass ☐ Fail
For complete replacement of duct systems only, if the 6 percent leakage rate criteria cannot be met, a smoke test should be performed to verify that the excess leakage is coming only from a pre-existing furnace cabinet (air handler cabinet), and not from other accessible portions of the duct system. A HERS rater must verify the installation (No sampling allowed).	
List **Actual** Leakage from smoke test(CFM)	
Pass if all accessible leaks (except for existing air handler) are sealed using smoke	☐ Pass ☐ Fail

HERS Provider watermark

Registration Number

210-N0001972A-M2000005B-0000

For more information, visit www.energy.ca.gov/title24 and www.energyvideos.com, or call the Energy Standards Hotline at (800) 772-3300.

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